UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,432	02/02/2004	Adam Leslie Clark	40006997-0007-002	3364

26263 7590 05/30/2007

SONNENSCHEIN NATH & ROSENTHAL LLP
P.O. BOX 061080
WACKER DRIVE STATION, SEARS TOWER
CHICAGO, IL 60606-1080

EXAMINER	
AGHDAM, FRESHTEH N	
ART UNIT	**PAPER NUMBER**
2611	

MAIL DATE	DELIVERY MODE
05/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/770,432	CLARK, ADAM LESLIE	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4, 11-12, 14, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham et al (US 5,222,154), and further in view of Sah et al (US 2003/0028509).

As to claims 1-2, 12, and 20, Graham teaches a method and/ or apparatus comprising encoding data values described by one or more multi-dimensional parameters (e.g. multiple colors), each of the multidimensional parameters having multiple constituent sub-parameters of more than one value; mapping the multi-dimensional parameters of the data values to respective one-dimensional parameters having one of the single sub-parameters by which the multi-dimensional parameters will now be represented (Col. 1, lines 7-11; Col. 3, lines 53-68; Col. 4, lines 1-15); and creating a table of encoded data values in which the data values are represented by

their respective encoded counterparts utilizing the one-dimensional parameters (Col. 5, lines 22-41). Graham is silent about the redundant ones of the encoded data values share common table entries. Sah teaches compressing data values, wherein the redundant ones of data values share common table entries (Pg. 5, Par. 52-58). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Sah with Graham in order to reduce memory consumption for the data in which it is advantageous when the data is repeatedly scanned (Par. 58).

As to claim 11, Graham teaches a method comprising encoding data values having one or more multi-dimensional parameters, each of the multi-dimensional parameters having multiple constituent sub-parameters of more than one value to describe an associated one of the parameters by combining a lossy encoding (Col. 1, lines 7-11; Col. 3, lines 53-68; Col. 4, lines 1-15) process in which the multiple constituent sub-parameters of each of the one or more multidimensional parameters of the data values are mapped to respective one-dimensional parameters having one of the single sub-parameter by which the multi-dimensional parameters will now be represented and stored in a table of encoded data values (Col. 5, lines 22-41). Graham is silent about a lossless encoding process in which redundant ones of the encoded data values are arranged to share common entries. Sah teaches compressing data values by encoding the data values with a lossless encoding process, wherein the redundant ones of data values share common table entries (Pg. 5, Par. 52-58). Therefore, it would have been obvious to one of ordinary skill in the art to combine the

teaching of Sah with Graham in order to reduce memory consumption for the data in which it is advantageous when the data is repeatedly scanned (Par. 58).

As to claims 4 and 14, Sah further teaches the encoded data values share identical parameter values (Par. 52-58).

Claims 3, 6-10, 13, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham et al and Sah et al, further in view of Lim (US 5,339,164).

As to claims 3 and 13, Graham and Sah teach all the subject matter claimed in claims 1 and 11, except for the data values being position information. One of ordinary skill in the art would recognize that the multi-dimensional data values that may be mapped to one-dimensional values comprise pixels, position information and color as it is evidenced by Lim (Abstract; Col. 19, Lines 56-67). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Lim with Graham and Sah in order to minimize the amount of digital data required to adequately represent image and enhances the speed at which the data can be communicated (Col. 1, Lines 26-35).

As to claims 6 and 16, Graham and Sah teach all the subject matter claimed in claims 1 and 11, except for transmitting the table of encoded data values to a receiver. Lim teaches transmitting the table of encoded data values to a receiver (Fig. 14A, Block 1432). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Lim with Graham and Sah in order to minimize the amount of

digital data required to adequately represent image and enhances the speed at which the data can be communicated Col. 1, Lines 26-35).

As to claims 7, 10, and 17, Lim further teaches decoding the table of encoded data values at the receiver using the table of encoded data values (Fig. 13B,) and a set of reference information (Fig. 13A and B; Fig. 12B, Blocks 1236 and 1238; Col. 18, Lines 54-66; Col. 19, Lines 1-6), wherein the reference information comprises a lookup table.

As to claims 8 and 18, Lim further teaches transmitting the reference information values together with the table of encoded data values (Fig. 13A and B; Col. 14, Lines 2-25).

As to claims 9 and 19, Lim further teaches storing the reference information values at the receiver prior to the transmission of the table of encoded data values (Fig. 13A and B; Col. 14, Lines 15-38).

Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham et al and Sah, further in view of Uchibayashi (US 2003/0133169).

As to claims 5 and 15, Graham and Sah teach all the subject matters claimed above, except for the redundant ones of the encoded data values share parameter values, which are similar to one another within a tolerance range. Uchibayashi teaches the redundant ones of the encoded data values share parameter values, which are similar to one another within a tolerance range (Par. 2). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Uchibayashi with

Graham and Sah in order to identify the redundant information values to reduce the amount of scanning necessary by a storage node and reduces memory consumption for the data file when scanned into memory.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hougui et al (US 7,177,474) see figures 1B, 3D, and 3E, column 7, lines 1-20, and column 8, lines 1-12 and 40-47.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is 571-272-6037. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KEVIN BURD
PRIMARY EXAMINER

May 25, 2007

Freshteh Aghdam
Examiner
Art Unit 2611